ARTICLE II of the Outer Space Treaty provides that "outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means." Even a perfunctory glance at this provision seems to suggest a number of fundamental questions which will have to be resolved if man's spatial explorations are to take place within a framework of law and order and with a minimum of friction. The first question relates to the subject matter of appropriation, that is, what can or cannot be appropriated. The second query involves the meaning of "national" appropriation in contradistinction to "nonnational," such as, individual or international appropriation. The third inquiry centers around the meaning of the concept of appropriation. Finally, the fourth question, which is incidental to the third one, is whether there is any room for the exercise of some form or degree of sovereign authority, use or occupation which would be permissible despite the prohibition of Article II.

I. SUBJECT MATTER OF APPROPRIATION

With respect to the problem of subject matter, the prohibition of national appropriation relates clearly to "outer space, including the moon and other celestial bodies." The Treaty is silent on the question of what is outer space, what it encompasses or what its boundaries are in relation to airspace. The only statement contained in the Treaty is that the moon and other celestial bodies are included in outer space. For this reason, the...
prohibition regarding national appropriation would unquestionably extend to the moon and other celestial bodies. Whether or not the prohibition would extend to outer space in its totality or only to part of it, or would relate to the moon or a celestial body as a whole or only to a part of it, are further significant questions. By common sense interpretation the prohibition could not very well relate to outer space as a whole since no one could at present appropriate outer space as a whole but only a part of it. Insofar as the moon and other celestial bodies are concerned, the prohibition could extend to the whole entity if national appropriation of the whole is indeed possible. But even in relation to the moon and other celestial bodies, it would appear by reasonable interpretation that the prohibition would also cover acquisition of a part of the moon or other celestial body. Any contrary interpretation would seem to make the prohibition of national appropriation largely illusory.

In relation to national acquisition of a part of outer space, further questions may be raised. For example, does the prohibition extend to the collection of dust particles or other special elements during flight in outer space? Does the prohibition extend to the appropriation of cosmic rays, gases or the sun’s energy, or to the collecting of mineral samples or precious metals on the moon or other celestial bodies? Should the answer depend on the type of resource involved, or on its availability in unlimited (cosmic rays, meteorites, gases) or limited (minerals, metals) quantities or perhaps on its location?

In attempting to give answers to these questions, it may be pointed out, first of all, that, in the absence of some special circumstance, little would be gained by insisting on the nonappropriation of resources such as cosmic rays or gases, which are available in inexhaustible quantities. At the same time, the Treaty as it stands seems to make little allowance for national acquisition of exhaustible spatial resources.

With respect to location, it could be argued that if any parts of outer space, including the moon and other celestial bodies, were found on the earth, they would not be subject to the prohibition of national appropriation since they would become part and parcel of the earth. Under a strict interpretation it may also be argued that the prohibition extends to the resource irrespective of its location. However, it might be preferable to distinguish between elements of outer space which have reached the earth
as a result of natural causes and those which have done so through human intervention. In the first instance national appropriation would not be prohibited, whereas in the second example the prohibition would apply. Thus, a meteorite falling on the earth could be appropriated whereas a precious stone or metal brought to the earth from outer space could not be a subject of national appropriation.

Regarding the jurisdictional boundaries of outer space, particularly the dividing line between airspace and outer space, we seem to know a little more now than we knew at the time of the first Colloquium on the Law of Outer Space back in 1958. At that time it did not appear with certainty that nation states would not object to the orbiting of foreign space instrumentalities over and above their territories. Today after more than a decade of spatial experiments, it can be said that an international custom seems to have sprung up which regards the area where space instrumentalities move in durable orbit as outer space. From this we also take for granted that anything above and beyond this area is also regarded as outer space. However, the more precise boundary line between airspace and outer space is still left undetermined.

II. NATIONAL APPROPRIATION

Turning to the second question which involves the meaning of "national" appropriation, it has been suggested that only the United Nations acting on behalf of the world community as a whole, should be entitled to appropriate. While further developments in space law, by international custom or treaty, may eventually prohibit spatial appropriations by an individual or a chartered company or the European communities, the Treaty in its present form appears to contain no prohibition regarding individual appropriation or acquisition by a private association or an international organization, even if other than the United Nations. Thus, at present, an individual acting on his own behalf or on behalf of another individual or a private association or an international organization could lawfully appropriate any part of outer space, including the moon and other celestial bodies. Whether or not an ad hoc international organization could be created for the exclusive purpose of enabling it to appropriate

outer space is a delicate question. The answer may have to depend on the good faith of the parties.

A further question in relation to "national" appropriation is whether or not political subdivisions of a state, such as the states of a federal state, cities or municipalities may appropriate? Under a strict interpretation, the answers to these questions would likely be in the negative even though an occasional court decision in other areas of the law may support an affirmative position.4

III. THE CONCEPT OF APPROPRIATION

With respect to the concept of appropriation the basic question is what constitutes "appropriation," as used in the Treaty, especially in contradistinction to casual or temporary use. The term "appropriation" is used most frequently to denote the taking of property for one's own or exclusive use with a sense of permanence. Under such interpretation the establishment of a permanent settlement or the carrying out of commercial activities by nationals of a country on a celestial body may constitute national appropriation if the activities take place under the supreme authority (sovereignty) of the state. Short of this, if the state wields no exclusive authority or jurisdiction in relation to the area in question, the answer would seem to be in the negative, unless, the nationals also use their individual appropriations as cover-ups for their state's activities.5 In this connection, it should be emphasized that the word "appropriation" indicates a taking which involves something more than just a casual use. Thus a temporary occupation of a landing site or other area, just like the temporary or nonexclusive use of property, would not constitute appropriation. By the same token, any use involving consumption or taking with intention of keeping for one's own exclusive use would amount to appropriation.

The question may also be asked whether or not the purpose of appropriation, that is whether it takes place in the name of science, for enrichment, or for any other purpose would have a bearing on the question of its lawfulness. Normally, the purpose of appropriation should have little

5. Gorove, supra note 1, at 45.
bearing on the prohibition except that to constitute appropriation, the acquisition must be carried out for the purpose of one’s own or exclusive use. However, since the Treaty proclaims freedom of scientific investigation in outer space, there seems to be some support for the argument that if the appropriation takes place in the name of science or in the course of a scientific investigation in outer space, including the moon and other celestial bodies, such use would not be prohibited under the Treaty. Nonetheless, if the proclaimed principle is taken literally, the same argument could not be used with equal force in a case where the scientific investigation was carried out on the earth. It is doubtful whether the Treaty intended such effect, but if it did not, it is unfortunate that it fails to make it clear.

IV. SOVEREIGN AUTHORITY

In relation to the question whether or not there is any room for the exercise of some form or degree of superior authority, jurisdiction, use or occupation in outer space, the answer would seem to be in the affirmative, since the Treaty prohibits the exercise of such authority, use or occupation only if it amounts to national appropriation. Under such interpretation, the temporary use of a spatial resource without the latter’s transformation or deterioration may be permissible, whereas the consumption or destruction of a resource may not.

Furthermore, insofar as the exercise of authority is concerned, the state on whose registry an object launched into space is carried must retain jurisdiction and control over such object, and over its personnel, while in outer space or on a celestial body. The Treaty also makes it dear that the states will be internationally responsible for national activities in outer space, including the moon and other celestial bodies, irrespective of whether such activities are carried on by governmental or nongovernmental entities. In fact, the activities of nongovernmental entities require authorization and continuing supervision by the state concerned. The fact that some measure of at least temporary exclusive

fi. See Treaty on Outer Space art. I, para. 3; Gorove, supra note 1, at 45.
1. Gorove, supra note 1, at 45.
8. Treaty on Outer Space art. VIII.
9. Id. at art. VI.
jurisdiction may be exercised over a particular area on the moon or other celestial bodies, such as a space station and its adjacent grounds is also apparent from Article XII which makes access by representatives of a foreign state contingent on reciprocity.

It is not the purpose of the foregoing brief analysis to attempt to resolve the complex problems which may arise in connection with the interpretation of Article II of the Outer Space Treaty. The purpose is rather to draw attention to the existence of these problems which will have to be resolved if man’s exploration of the cosmos is to be guarded by law and order.